

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application

Martin QUANZ *et al.*

Appl. No. *To Be Assigned* (Continuation of  
Int'l. Appl. No. PCT/EP99/04199; Filed: June 17,  
1999)

Filed: *Herewith*

Group Art Unit: *To Be Assigned*

Examiner: *To Be Assigned*

For: **Method For Preparing Water-Insoluble  $\alpha$ -1,4-Glucans**

**PRELIMINARY AMENDMENT**

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Sir:

Preliminary to examination of the above-referenced application, please amend the application  
as follows:

**IN THE SPECIFICATION:**

Please amend the specification as follows:

Page 1, after the title, please add

-- Related Applications

This application is a continuation of International Application Number PCT/EP99/04199, filed  
17 June 1999, which in turn claims priority from German Patent Application No. 198 27 978.1, filed  
24 June 1998, both of which are incorporated herein by reference.--

After the claims please add the following:

**--ABSTRACT OF THE DISCLOSURE**

An in-vitro method for producing water-insoluble  $\alpha$ -1,4-glucan is described, wherein  
saccharose is reacted in a buffer-free system using an amylosaccharase.--

**IN THE CLAIMS:**

Please delete claims 1-8 and insert new claims 9-24 as follows:

--9. A method of preparing water-insoluble  $\alpha$ -1,4-glucans comprising contacting a reaction mixture comprising sucrose with an enzyme having amylosucrase enzymatic activity under aqueous, buffer-free conditions to provide a product mixture comprising water-insoluble  $\alpha$ -1,4-glucans and fructose.

10. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is an enzyme from a prokaryotic organism.

11. The method of claim 10 in which the prokaryotic organism belongs to the genus *Neisseria*.

12. The method of claim 11 in which the prokaryotic organism is *Neisseria polysaccharea*.

13. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is recombinantly produced.

14. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is substantially purified.

15. The method of claim 9 in which the enzyme having amylosucrase enzymatic activity is bound to a support material.

16. The method of claim 9 which further comprises adding an external carbohydrate acceptor to the reaction mixture.

17. The method of claim 16 in which the external carbohydrate acceptor is added at the beginning of the conversion.

18. The method of claim 17 in which the external carbohydrate acceptor is selected from linear or branched polysaccharides.

19. The method of claim 18 in which the external carbohydrate acceptor is selected from dextrin, glycogen, or amylopectin.

20. A method of preparing water-insoluble  $\alpha$ -1,4-glucans comprising contacting sucrose with an amylosucrase under aqueous, buffer-free conditions to provide water-insoluble  $\alpha$ -1,4-glucans and fructose.

21. The method of claim 20 in which the amylosucrase is from a prokaryotic organism.

22. The method of claim 21 in which the prokaryotic organism belongs to the genus *Neisseria*.

23. The method of claim 22 in which the prokaryotic organism is *Neisseria polysaccharea*.

24. The method of claim 20 in which the amylosucrase is designated (E.C. 2.4.1.4.).--

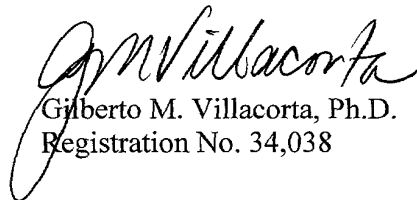
**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment to deposit account no. 50-0436.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 50-0436.

Respectfully Submitted,

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